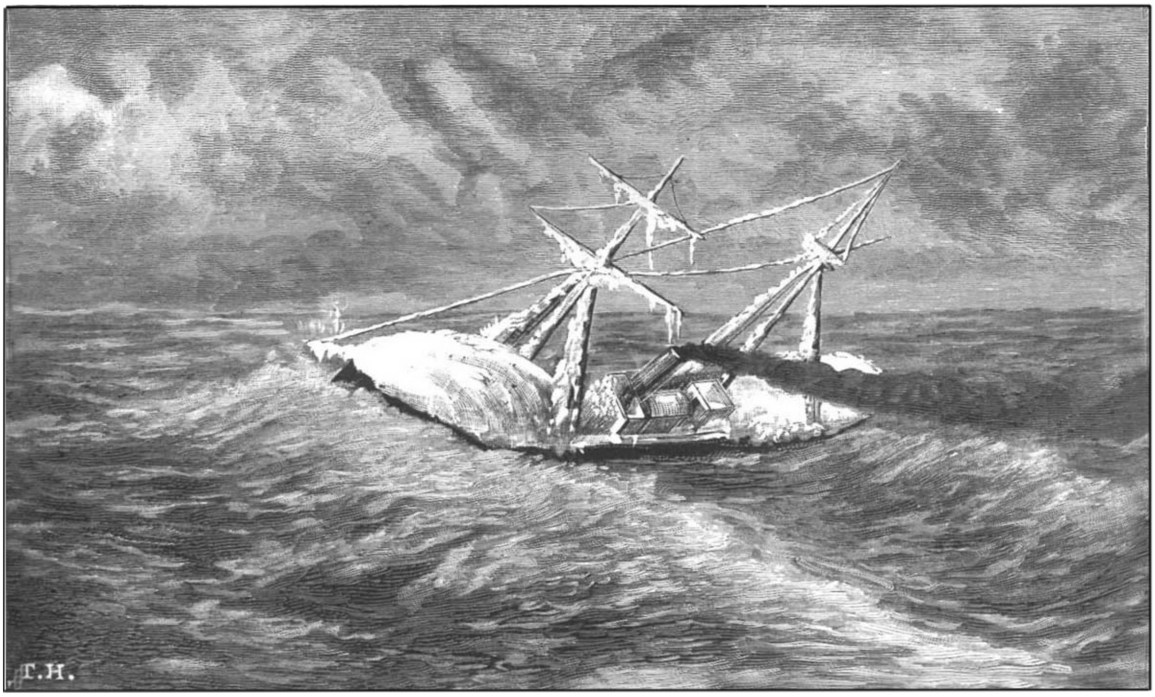
As time passed on the continued action of the sea raised a perfect iceberg on the forward part of the vessel, while the showers of spray carried along by the steadily increasing gale covered the masts, yards, and rigging with an ever-thickening coating of ice. Two or three days passed without the least abatement of the storm, and then the half-smothered steamer went over on her beam ends. The crew succeeded in cutting away the masts, and she once more righted.

It however was clear, the gale showing no signs of breaking, that the relief was only temporary. The ice continued to form on the vessel, particularly about the forecastle, where, piled high above the bulwarks, and overhanging the sides, it threatened, by altering her trim, to raise the propeller out of the water.

Under these circumstances, on the morning of January 29, Capt. Kihl decided to run the steamer ashore while daylight lasted. At some distance from the land she struck on a sunken rock, and the crew, taking to the boats, only succeeded with the greatest difficulty in reaching the shore, saving nothing but their lives, the English mail, and a bundle of blankets which (when carried ashore) was found to be useless—frozen into a solid lump. Their situation in deep snow on the desolate coast of Iceland, about 100 miles to the north-west of Reykjavik, was very critical, and a party of two or three of the stronger sailors under the command of M. Jaspersin, the first officer, proceeded in search of assistance. It was not however until about three in the morning of the 30th, after suffering great hardships, that the sound of a pony kicking in a shed guided them to a house. The farmers immediately turned out, and eventually the scattered crew, twenty-two or twenty-three in number, were picked up, some of the clever little Icelandic dogs proving themselves most valuable auxiliaries in the search. Many of the men, however, were all but frozen to death in the snow. From this time all possible attention was given to them; but one, having both legs and arms frost-bitten, died; another afterwards had both legs amputated below the knees; and the steward lost three fingers of each hand. Hardly one escaped more or less injury from the effects of the extreme cold to which they had been so long exposed. Capt. Kihl and the bulk of his crew soon after succeeded in getting to Reykjavik, and on April 13 they sailed in the sister steamer, the *Arcturus*, for Copenhagen. The officers and men of the wrecked vessel are of opinion that had Capt. Kihl not decided on the 29th to run the *Phœnix* ashore in daylight not a soul would have been saved, as the gale did not moderate for several days after; and the steamer, buried as it was under an enormous mass of ice, must have foundered in the night.



In Iceland this storm will be long remembered by the destruction it caused; and it is said that such a terrible winter has not been known for years. Sheep have perished in large numbers, and ponies have been killed to save hay. Then as the Icelanders depend on the outer world for flour, &c., the loss of the *Phœnix* with its cargo was a terrible misfortune. A letter from Reykjavik to a lady in Edinburgh, published on April 21 (and dated the 10th), states that the magazines were empty, and concludes thus: "It was very delightful to see the steamer *Arcturus* coming in the other day after having expected it so long. It brought both news and provisions, so that the poor people in the neighbourhood of Reykjavik can be helped for a while."

J. ALLEN ALLEN

NOTES

CAPT. FREDERICK JOHN OWEN EVANS, C.B., F.R.S., has been made a K.C.B. Among all the crowd of names gazetted for such honours on the Queen's birthday, not one had better deserved it by his services to his country, as well as to science, than the well-known Hydrographer to the Admiralty.

THE Visitation of the Royal Observatory takes place on Saturday. No doubt it will be numerously attended, as it is announced that Sir George Airy has resigned his post for the 1st of August.

THIS is a week of *soirées*. The Royal Society *soirée* on Wednesday is followed by the Society of Arts *soirée* to-night, while the President of the Institution of Civil Engineers has issued invitations for another on Friday. These two last are held in the galleries of the South Kensington Museum.

MUCH interest has always been attached by anthropologists to the Stone Age of Egypt, on account of its bearing on the antiquity of man. Hitherto the finds of stone implements have been purely superficial, but in March last General Pitt-Rivers, President of the Anthropological Institute, discovered worked flints two to three metres deep in stratified gravel and mud near Thebes. The gravel had become so indurated in Egyptian times that they were able to cut square-topped tombs supported by square pillars in it, and these have remained in their original condition to this day. Some of the implements were chiselled out of the gravel in the sides of these tombs. General Pitt-Rivers will read a paper giving an account of this discovery at the Anthropological Institute on Tuesday next, the 7th inst.

MR. J. Y. BUCHANAN has, we learn, gone to Italy to see the ship which the Italian Government has fitted out for deep sounding in the Mediterranean.

THE "General Report of the Norwegian North-Atlantic Expedition" is being published in parts, each Memoir being distributed immediately on its leaving the press. The General Report will comprise the following Memoirs:—Capt. Wille, R.N. (Narrative of the Expedition—Description of the Apparatus, how constructed and used—Magnetical Observations); Prof. H. Mohn (Meteorology—Deep-sea Temperatures—Motion of the Sea—Astronomical, Geographical, Geological Observations); Mr. H. Tornoe (Amount of Air in Sea Water—Amount of Carbonic Acid in Sea Water—Amount of Salt in Sea Water); Mr. L. Schmelck (the Salts in Sea Water—Investigation of Bottom Samples); Prof. G. O. Sars (Crustacea, Pycnogonida, Tunicata, Bryozoa, Hydrozoa, Spongozoa, Rhizopoda, Protophyta); Drs. Danielssen and Koren (Holothurida, Echinida, Asterida, Crinoida, Gephyrea, Anthozoa); Mr. H. Friele (Mollusca, Brachiopoda); Dr. G. A. Hansen (Annulata); Mr. R. Collett (Fishes). The publication of the Report, for which a grant of money has been obtained from the Norwegian Storthing, is conducted in conformity with the directions of His Norwegian Majesty's Government. Of the memoirs we have received that on "Fishes," by Mr. R. Collett, and "Chemistry," by Mr. H. Tornoe.

WE greatly regret to learn that Dr. James Croll, F.R.S., has been compelled, in consequence of ill-health, to retire from his position on the Geological Survey. The same reason will account for his not replying to certain correspondence and criticisms which would otherwise have claimed his attention.

DR. AUGUST WILHELM EICHLER, Director of the Royal Botanic Garden and Museum, Berlin, and Professor of Systematic Botany at the University, has recently been elected a Foreign Member of the Linnean Society in the room of the late G. P. Schimper of Strassburg. Prof. Eichler is well known among botanists for his memoir, "Loranthaceæ et Balanophoræ," in Martius's "Flora Brasiliensis"; also as author of "Entwicklungeschichte des Blattes," and "Blüthendiagramme," &c.

WE regret to have to record the sudden death early in March of Mr. John Sanderson, one of the oldest colonists of Natal. From his arrival in 1850 he resided in Durban, where he conducted for many years one of the most influential newspapers. He was otherwise much occupied with public business, and was for some time a member of the Legislative Council. To botanists in Europe he was well known as an ardent explorer of the South African flora and active correspondent, and his name is commemorated by the beautiful genus *Sandersonia*.

A MONUMENT is to be erected to the memory of the late Dr. Broca, the founder of the Paris Anthropological Society; not less than 14,000 francs have already been collected. We are desired to state that the list will soon be closed, and that all subscriptions are to be sent as early as possible to M. Leguay, treasurer of the fund, at the Paris Anthropological Society.

THE Dorpat University offers two prizes of 750 and 500 roubles respectively for the two best models of a monument in memory of Karl Ernst von Baer. Sculptors are informed that the models will be received by the University until September 15 next, and that the carriage to and from Dorpat will be defrayed by the University. Professors Dr. Grosse (Dresden) and Bohnstedt (Gotha) are members of the committee of decision.

A MONUMENT of the celebrated naturalist, Freiherr von Siebold, was unveiled in the park of the Vienna Horticultural Society on April 22 last. The monument is four metres high, and is in the form of an obelisk with a granite pedestal. The upper part is formed by a very ancient memorial stone ornamented with floral designs, which was originally sent to the Vienna Exhibition by the Japanese Government, and was afterwards destined for this monument. Below this stone is a slab of marble bearing an excellent bas-relief of Siebold, the work of Schwanthaler. The whole monument is surrounded by living fir-trees, which were obtained from the Rax Alpe.

THE death is announced of Dr. Ludwig Rabenhorst of Meissen (Saxony). He was a well-known botanist and editor of the *Hedwigia*. Among his numerous publications we may point out "Die Süsswasser Diatomaceen" (Leipzig, E. Kummer) as an indispensable companion to all students of microscopical plants.

THE *conversazione* of the Society of Arts takes place to-night at South Kensington, and that of the Institution of Civil Engineers to-morrow night at the same place.

THE death is announced of Herr Andreas Schmid of Eichstätt (Bavaria), the editor of the *Bienenzeitung*, and author of numerous treatises and pamphlets on bee-culture

THE Whit-Monday excursion of the Geologists' Association is to be to the Isle of Wight, and will last three days.

DR. SCHLIEMANN has recently been nominated "honorary citizen of Berlin," and has also been presented with the large gold medal "for Arts and Sciences" by the Grand Duke of Mecklenburg-Schwerin.

IN a brickfield near Lützen (Saxony) some 200 sepulchral urns, skulls, and bones have been found. Dr. Virchow has examined one of the skulls, and declares it to be of a very peculiar type, somewhat resembling the well-known Neander Valley skull, but yet differing from it sufficiently to form a special type of its own. The whole discovery at Lützen, combining cremation and ordinary burial, is at present unique. No ornaments of any kind were discovered.

THE Jablonowski Society at Leipzig offers the following prizes in its scientific section for 1881:—700 marks (35*l.*) for an investigation of the motion of Encke's comet, at least for the period since 1848, taking into account all disturbing influences; for 1882: the same amount for a compilation of our present knowledge of the corrosion-figures of crystals, with an account of original experiments on this subject and a deduction of general maxims regarding the cohesion and structure of crystals as well as their molecular conditions; for 1883: the same amount for a determination of the photo-electrical tensions produced in artificial and suitably-coloured crystals by the action of light and their relations to the thermo-electrical effects produced by changes of temperature.

The works will begin immediately for the construction of the International Exhibition Electrical Railway, as we are glad to state that the request of Messrs. Siemens has been granted by the Municipal Council of Paris.

Our Paris Correspondent was present last Friday during an experiment made by M. Trouvé on a small boat between Port Royal and Pont des Arts. The boat, measuring 5m. 50 by 1·30, and carrying three persons, obtained a mean velocity of 1m. 30 per second, with a magneto-electric motor weighing 2 kilogr., and two series of six Wollaston elements weighing 12 kilogr. each. The trial lasted an hour and a half, and was interrupted by darkness. These experiments will be repeated shortly on the Bois de Boulogne lakes. The motor, which was constructed to give 8 kilogrammetres per second, did a duty which a single rower would have been unable to perform. The electro-magnetic motor was placed on the rudder, and the motion communicated to a small screw placed in the lower part by a chain. This system is not calculated to utilise the whole extent of the motive power generated by the elements, but it dispenses entirely with any alteration to the boat. This last circumstance is considered as decidedly important in popularising the system amongst yachtsmen. There is not the slightest vibration or noise of any description felt on board.

The lectures which were delivered in connection with the Glasgow Naval and Marine Engineering Exhibition are about to be published.

Mr. W. R. Browne has issued a carefully revised edition of the Library Catalogue of the Institute of Mechanical Engineers, combining both a list of authors and of subjects. It also contains a Subject-Index of papers in the *Proceedings*, 1847-80.

Mr. C. W. Harding, of King's Lynn, received prizes for two papers at the Recent Norwich Fisheries Exhibition:—1. "Essay on the Artificial Propagation of Anadromous Fish other than the Salmon, and the Re-stocking of the Tidal Waters of our Large Rivers Artificially with Smelts," &c.; 2. "On the Utilisation of Localities in Norfolk and Suffolk suitable for the Cultivation of Mussels and other Shell Fish."

On Monday night shocks of earthquake were felt at the Observatory on Mount Vesuvius and at the villages at the foot of the mountain, especially at Torre del Greco. At nine o'clock on Tuesday morning the seismographic activity was decreasing.

The Swiss Federal Commission for Meteorology has been definitively constituted for three years as follows:—M. Schenk, president; Professors R. Wolf (Zürich), Hagenbach (Basel), Plantamour (Geneva), Ch. Dufour (Morges), Forster (Berne), and Weber (Zürich), and M. Coaz Inspector of Forests at Berne. The Commission met at Berne on May 23, and discussed the institution of a Central Board at Zürich. Want of means has prevented it from opening the important meteorological station on the summit of Mount Sentis.

M. de Lesseps has been urging upon the Khedive of Egypt the re-establishment of the Cairo Observatory, originally founded by Mehemet Ali; its fine instruments have been long ago dispersed among various establishments. The atmosphere of Egypt is peculiarly favourable for observatory work, and we hope the Khedive will take M. de Lesseps' advice.

A Marine Exhibition will be held at Hamburg in September next, of which nautical and astronomical instruments will form the principal part.

A correspondent (A. H. McC.) of the New York *Weekly Evening Post*, writes on the question of the Sound of the Aurora:—In your edition of Saturday I noticed an abstract from "Record of a Girlhood," in regard to hearing the aurora borealis, and therefore beg to give you my experience on the subject. In the winter of 1846 I crossed the Atlantic from Newfoundland to Greenock in the brig *Amanda*. We had strong southerly winds the whole passage, without seeing the sun until after making land; three days previously a strong southerly gale carried away our only top-sail, leaving us without sufficient after sail, and consequently we were driven far to the northward. The day before we made land the wind suddenly changed to the north-west, and as night approached the sky became clear. At about 9 o'clock p.m. the captain called all passengers on deck, and a more magnificent spectacle was never contemplated—the whole heaven was a blaze of white light, the aurora darted and rushed from every point and reflected each colour of the rainbow. While it lasted we could distinctly hear the sound, as if the folds of heavy silk were shaken, sometimes sharp and quick, and then receding until the sound was lost, according to the intensity of the flash. During most of the time a book could easily be read on deck. The phenomenon lasted about four hours, during which time we all remained on deck. Next morning we made land, which proved to be Barra Head, Southern Hebrides, and were able to lay our course.

On May 2 the German Fisheries Society held its annual meeting at Berlin, his Imperial Highness the Crown Prince being present. Herr Friedel, the director of the Märkische Museum, delivered a festive address on "Pre-scientific Fishing." Afterwards the president of the Society, Herr von Behr-Schmoldow, read the report for the year, which was highly favourable. Some 6,000,000 ova have been "sown out" in German waters. Excellent results were obtained with 300,000 American salmon ova and a similar number of shad ova. The intercourse with the fisheries societies in Austria, France, and the United States was very successful and remunerative.

At the annual general meeting of the Sanitary Institute of Great Britain on May 25, Dr. Richardson, F.R.S., who for four years past has acted as Chairman of Council, and who now goes out of office by rotation, after expressing his thanks to his colleagues for all the courtesies they had shown him, said he could not, he thought, conclude his work as chairman more usefully than by giving a short account of some recently conducted researches which he had made as to the periods of incubation of the infectious diseases which the sanitarian has to combat. He proceeded to indicate that there are twenty-six well-known diseases of this kind, and they each have their special periods of incubation, which, though open to exceptions, are fairly regular. The period of incubation was that period which intervened between the acceptation of the poison that caused the disease and the first manifestation of effect. Diseases might thus be grouped according to their stages of incubation into five classes—*Shortest*, *Short*, *Medium*, *Long*, *Longest*. The shortest period was one to four days: under this head came plague, cholera, malignant pustule, and dissection poison. The second period was from two to six days, and under this head came scarlet fever, diphtheria, croup, erysipelas, hooping-cough, influenza, glanders, and pyæmia. The medium period was from four to eight days, and in it are included cow-pox and relapsing fever. The long period had ten to fifteen days, and included in it measles, mumps, typhus, and typhoid. The longest period, forty days, included syphilis, and might include hydrophobia. Dr. Richardson concluded his address by showing the important practical sanitary lessons that were connected with a correct knowledge of these periods of incubation.

The Technological, Industrial, and Sanitary Museum of New South Wales is, we learn, intended to occupy a similar position and fulfil the same purpose in that colony which the South Kensington Museum, the Bethnal Green Museum, the Museum of Practical Geology, the Patent Office Museum, and the Parkes Museum of Hygiene do in London. To this end, it is intended to collect together typical collections of all materials of economic value belonging to the animal, vegetable, and mineral kingdoms, from the raw material through the various stages of manufacture, to the final product or finished article ready for use. It is intended that the following shall be more or less completely represented:—Animal products; vegetable products; waste products; foods; economic entomology; economic geological specimens; educational apparatus and appliances; sanitary and hygienic appliances and systems; mining, engineering, and machinery; agricultural tools, appliances, and machinery; also soils, manures, &c.; models, drawings, and descriptions of patents; ethnological specimens; examples of historical furniture and of artistic workmanship in iron and other metals; photographs, electrotype, plaster, and other reproductions of examples of art workmanship where originals are not to be obtained. Exhibition catalogues, trade journals, price lists, and descriptions of new processes or industries. The acting secretary is Mr. Charles R. Buckland.

We have received the abstract of *Transactions* of the Anthropological Society of Washington for the first two years of its existence, ending January, 1881. It contains brief notices of the meetings of the Society, the papers read, as might be expected, relating mostly to American Indians. A paper by Col. Mallory, "On the Comparative Mythology of the Two Indias (Asia and America)" shows that many resemblances exist between them, arising solely, however, from the efforts of two quite distinct primitive peoples to interpret the same natural phenomena. Prof. Gill deals with the Zoological Relations of Man. The principal papers, however, are the annual addresses of the president, Mr. J. W. Powell, on the Evolution of Language, as Exhibited in the Specialisation of the Grammatic Processes, the Differentiation of the Parts of Speech, and the Integration of the Sentence, from a Study of Indian Languages; and on Limitations to the Use of Anthropological Data. Mr. Powell has also a long paper on "Wyandot Government—a Short Study of Tribal Society."

We have received a long letter from Mr. Gerald Massey on our review of his "Book of the Beginnings," which we regret we are unable to print. We should state, however, that the word *bottle*, p. 49, col. 1, line 17 from bottom, was a misprint for *beetle*; and the following extract from Mr. Massey's work (vol. i. p. 145) will show the sense in which he quoted Prof. Max Müller:—"If the first man were called in Sanskrit Adima, and in Hebrew Adam, and if the two were really the same word, then Hebrew and Sanskrit could not be members of two different families of speech, or we should be driven to admit that Adam was borrowed by the Jews from the Hindus, for it is in Sanskrit only that Adima means the first, whereas in Hebrew it has no such meaning."—(Quoted from Max Müller's "Science of Religion," p. 302).

The additions to the Zoological Society's Gardens during the past week include a Chacma Baboon (*Cynocephalus porcarius* ♀) from South Africa, presented by Mrs. Findlay; a Common Marmoset (*Hapale jacchus*), a Black-eared Marmoset (*Hapale penicillata*) from South-East Brazil, presented by Mr. C. Stewart; a Two-spotted Paradoxure (*Nandinia binotata* ♀) from West Africa, presented by Mr. W. H. Hart; a Bennett's Gazelle (*Gazella bennetti*) from Afghanistan, presented by Brigadier-General Tanner; a Globose Curassow (*Crax globicera*) from Central America, presented by Mr. Allan Lambert; a Slow-worm (*Anguis fragilis*), British, presented by Mr. G. Mengee; three Peacock Pheasants (*Polyplectron chinquis* ♂ ♂ ♀) from British Burmah, six Nuthatches (*Sitta cæsia*), British, deposited; two Ring-necked Pheasants (*Phasianus torquatus* ♂ ♀) from China, two Swinhoe's Pheasants (*Euplocamus swinhoii* ♂ ♀) from Formosa, four Chilian Pintails (*Dafila spinicauda*) from Antarctic America, an Antarctic Skua (*Stercorarius antarcticus*) from the Antarctic Seas, a Dominican Gull (*Larus dominicanus*) from the Falkland Islands, a White-marked Duck (*Anas specularis*) from the Straits of Magellan, an African Wild Ass (*Equus tæniopus* ♂) from Abyssinia, purchased; a Cashmere Shawl Goat (*Capra hircus*), a Mouflon (*Ovis musimon* ♀), born in the Gardens; three Variegated Sheldrakes (*Tadorna variegata*) bred in the Gardens.

OUR ASTRONOMICAL COLUMN

A New Variable Star.—Prof. Julius Schmidt publishes an account of his observation of a star of from 8m. to 9m. in Canis Minor on April 1, which had not been remarked as late as March 28, and of which not a trace was visible on the following night. On November 25, 1879, Mr. Baxendell discovered a star in Canis Minor of about 8·8m., and of a decided orange colour, where the *Durchmusterung* showed no star, which gradually diminished, until on January 11, 1880, it was estimated 9·6. Prof. Schmidt gives the position of this star from observations at Athens and at Dunecht, with the places of two of Bessel's stars as follows for 1880·0:—

	R.A. h. m. s.	Decl.	
W.B., 7h. 1014 ...	7 34 18·04 ...	+ 8° 40 20·9 ...	(*b*)
Baxendell's star ...	7 34 49·98 ...	+ 8 39 30·1 ...	(*x*)
W.B., 7h. 1029 ...	7 34 54·17 ...	+ 8 42 29·4 ...	(*a*)

Examining this neighbourhood with a 5½-feet refractor on the evening of April 1, he remarked a star (*c*) of between the eighth and ninth magnitude, and by "eine Ordinaten-construction" from a diagram then made, he judged its position for 1880·0 to be in R.A. 7h. 34m. 56·4s., Decl. + 8° 41′·4. If these places are reduced to the epoch of the *Durchmusterung* (1855·0) they will stand as follows:—

	m.	R.A. h. m. s.	Decl.	
b ...	9 ...	7 32 56·6 ...	+8° 43·7	
x ...	9 ...	7 33 28·5 ...	+8 42·8	
a ...	8·3 ...	7 33 32·8 ...	+8 45·8	
c ...	9 ...	7 33 35·0 ...	+8 44·4	without a greater error than 0′·7.

On April 2, at 8h., with the same refractor, not the slightest trace of *c* could be discovered, and on taking the precaution to examine the stars within a space of two minutes (time) preceding and following the place by the previous night's observation, no similar object was found: a star 10m., wanting in Argelander, showed no motion in two hours. On April 3 and 4 Prof. Schmidt was similarly unsuccessful. Baxendell's star had been compared with Bessel's two stars with the Cometen-Sucher on eighty-six evenings between 1879, December 6, and 1881, March 28 (an instance, by the way, of the scrutinising system of observation which the indefatigable astronomer of Athens is accustomed to apply in his variable-star work): on no occasion was any object noted in the place of the star *c*.

Prof. Schmidt has remarks upon this observation to the following effect: if the object had been a distant planet it would have been found on April 2, 3, and 4 close to its place on April 1. If it had belonged to the group of minor planets it would have been readily identified on one of the evenings the vicinity was examined, by means of the *Durchmusterung*, without knowledge as to the direction of motion. If it were a variable star there was a variation of light from 8·5m. to absolute invisibility in twenty-four hours, which has never been remarked in any other variable; and lastly, if it were a *Nova*, of the class to which the well-known stars of 1848, 1860, 1866, and 1876 have been assigned, its illumination is limited to the interval between the evenings of March 28 and April 1, and therefore could have extended only to four days.

Referring the places of the objects observed by Baxendell and Schmidt to the star of 8·3m., No. 1029 of Weisse's Bessel, we find—

	Angle of position.	Distance.
For Baxendell's star	207°·8	135″
For Schmidt's star	153·2	73

Fellöcker's careful work for the Berlin Chart, Hour VII., does not render any assistance in this case. One of our many amateurs might advantageously take up the systematic and frequent obser-